

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A process for producing a transgenic sugar beet plant, which comprises:
 - a) transforming at least one sugar beet cell with at least two transgenes, with the first transgene encoding a vacuolar pyrophosphatase (V-PPase) and the second transgene encoding at least one of a cytosolic ~~and/or and a~~ nucleus-located soluble pyrophosphatase (C-PPase),
 - b) culturing and regenerating the transformed cells under conditions which lead to the complete regeneration of the transgenic beet plant, and
 - c) obtaining a transgenic beet plant having at least one of an increased sucrose content in the beet, an increased ~~and/or extended~~ meristem activity, an extended meristem activity and/or and a reduced rate of sucrose breakdown during storage.
2. (Currently Amended) The process as claimed in claim 1, wherein the first transgene comprises a nucleic acid sequence which is selected from the group of ~~the~~ nucleotide sequences consisting of
 - a) a nucleotide sequence depicted in SEQ ID No. 4, or a sequence which is complementary thereto,
 - b) a nucleotide sequence encoding the amino acid sequence depicted in SEQ ID No. 5, or a sequence which is complementary thereto, and
 - c) a nucleotide sequence which exhibits a sequence identity of more than 80% with the sequence according to a) or b).
3. (Currently Amended) The process as claimed in claim 1 ~~or~~ 2, wherein the second transgene comprises a nucleic acid sequence which is selected from the group of ~~the~~ nucleotide sequences consisting of

- a) a nucleotide sequence depicted in SEQ ID No. 1, or a sequence which is complementary thereto,
- b) a nucleotide sequence encoding the amino acid sequence depicted in SEQ ID No. 2, or a sequence which is complementary thereto, and
- c) a nucleotide sequence which exhibits a sequence identity of more than 80% with the sequence according to a) or b).

4. (Currently Amended) The process as claimed in claim 1 one of the preceding claims, wherein at least one of the first and/or and the second transgene is arranged on a vector.

5. (Currently Amended) The process as claimed in claim 1 one of the preceding claims, wherein the vector is equipped for overexpressing at least one of the first and/or and the second transgene.

6. (Currently Amended) The process as claimed in claim 1 one of the preceding claims, wherein at least one of the first and/or and the second transgene ~~is/are~~ is operatively linked, on the vector, to a promoter.

7. (Currently Amended) The process as claimed in claim 1 one of the preceding claims, wherein the promoter is a tissue-specific promoter, a constitutive promoter, an inducible promoter or a combination thereof.

8. (Currently Amended) The process as claimed in claim 1 one of the preceding claims, wherein the promoter is a promoter from *Beta vulgaris*, *Arabidopsis thaliana* or the cauliflower mosaic virus.

9. (Currently Amended) The process as claimed in claim 1 one of the preceding claims, wherein the promoter is the CaMV35S promoter.

10. (Currently Amended) The process as claimed in claim 1 one of the preceding claims, wherein the promoter is a *Beta vulgaris* V-PPase promoter.

11. (Currently Amended) The process as claimed in ~~the preceding~~ claim 10, wherein the promoter comprises a nucleotide sequence which is selected from the group of nucleotide sequences consisting of

- a) a nucleotide sequence as depicted in SEQ ID No. 6 or 7, or a sequence which is complementary thereto, and
- b) a nucleotide sequence which exhibits a sequence identity of more than 80% with one of the sequences as depicted in SEQ ID No. 6 or 7.

12. (Currently Amended) The process as claimed in claim 1 ~~one of the preceding~~ claims, wherein the promoter is ~~the~~ a sucrose synthase promoter.

13. (Currently Amended) The process as claimed in claim 1 ~~one of the preceding~~ claims, wherein the promoter is a storage-specific promoter.

14. (Currently Amended) The process as claimed in claim 1 ~~one of the preceding~~ claims, wherein the vector possesses intrans enhancers or other regulatory elements.

15. (Currently Amended) The process as claimed in claim 1 ~~one of the preceding~~ claims, wherein the first and second transgenes are arranged together on a single vector.

16. (Currently Amended) The process as claimed in claim 1 ~~one of the preceding~~ claims, wherein the first and second transgenes are arranged on different vectors.

17. (Currently Amended) The process as claimed in claim 1 ~~one of the preceding~~ claims, wherein the first and second transgenes are transformed simultaneously.

18. (Currently Amended) The process as claimed in claim 1 ~~one of the preceding~~ claims, wherein the transformation is at least one of a biolistic transformation, an electrotransformation, an agrobacterium-mediated transformation and/or and a virus-mediated transformation.

19. (Currently Amended) A transgenic, ~~preferably fertile~~; plant containing at least one transformed cell, said plant which can be obtained using a process as claimed in claim 1 one of the preceding claims.

20. (Currently Amended) The transgenic plant as claimed in ~~the preceding~~ claim 19, which exhibits an increased content of sucrose in comparison to a corresponding non-transgenic plant.

21. (Currently Amended) The transgenic plant as claimed in claim 19 one of the preceding claims, which exhibits an increase in meristem activity during growth in comparison to a corresponding non-transgenic plant.

22. (Currently Amended) The transgenic plant as claimed in claim 19 one of the preceding claims, which exhibits a decreased rate of sucrose breakdown during storage in comparison to a corresponding non-transgenic plant.

23. (Currently Amended) A harvesting or propagation material from a transgenic plant as claimed in claim 19 one of the preceding claims.

24. (Currently Amended) A nucleic acid molecule encoding a protein having the biological activity of a *Beta vulgaris* soluble pyrophosphatase, ~~in particular a C-PPase~~, with the sequence of the nucleic acid molecule being selected from the group of the nucleotide sequences consisting of:

- a) a nucleotide sequence depicted in SEQ ID No. 1, or a sequence which is complementary thereto,
- b) a nucleotide sequence encoding the amino acid sequence depicted in SEQ ID No. 2, or a sequence which is complementary thereto, and
- c) a nucleotide sequence which exhibits a sequence identity of more than 80% with the sequence according to a) or b).

25. (Currently Amended) A nucleic acid molecule encoding a promoter of a *Beta vulgaris* vacuolar pyrophosphatase (V-PPase), with the sequence of the nucleic acid molecule being selected from the group of nucleotide sequences consisting of

- a) a nucleotide sequence as depicted in SEQ ID No. 6 or 7, or a sequence which is complementary thereto, and
- b) a nucleotide sequence which exhibits a sequence identity of more than 80% with one of the sequences as depicted in SEQ ID No. 6 or 7.

26. (Currently Amended) A method ~~The use of the nucleic acid molecule as claimed in claim 24 for producing a transgenic plant which contains at least one transformed cell, said method comprising producing said plant with the use of the nucleic acid molecule as claimed in claim 24.~~

27. (Currently Amended) A vector which contains the sequence of the nucleic acid molecule as claimed in claim 24 ~~and/or 25~~.

28. (Original) The vector as claimed in claim 27, which is a viral vector or a plasmid.

29. (Currently Amended) A method ~~The use of the vector as claimed in claim 27 or 28 for producing a transgenic plant which contains at least one transformed cell, said method comprising producing said plant with the use of the vector claimed in claim 27.~~

30. (Currently Amended) A host cell which is transformed with a vector as claimed in claim 27 ~~or 28~~.

31. (Original) The host cell as claimed in claim 30, which is a bacterial cell, plant cell or animal cell.